

An oscillographic study of current ... S/196/61/000/011/036/042  
E194/E155

from one half of the electrode to the other causes deflection of the beam on the screen in a direction opposite to the zero line. The discharge took place in a bath of industrial kerosine, and in air with the electrode wetted with kerosine. The oscillogram showed the existence of two types of irregular oscillation channels on the electrode surface; oscillations of high frequency and low amplitude, and vice versa. The currents in the parallel branches of the discharge surface were always unequal. Oscillations occur at the starter discharge, when almost all the current passes through one of the parallel branches. It was not possible from the oscillograms to determine the frequency of transition from one half of the electrode to the other; it is nevertheless suggested that these transfers take place at very high frequency ( $10^8 - 10^9 \text{ sec}^{-1}$ ). Here the discharge current passes preferentially through that half of the electrode on which the total residence time of the migrating discharge channel is the greater. ✓

2 literature references.

[Abstractor's note: Complete translation.]

Card 2/2

NEKRASHEVICH, I.G.; BAKUTO, I.A.

Efficiency of the electric spark machining process. Sbor. nauch.  
trud. Fiz.-tekh.inst. AN BSSR no.7:96-100 '61. (MIRA 15:7)  
(Electric metal cutting)

NEKRASHEVICH, I.G.; BAKUTO, I.A.

Current status of theoretical concepts of the nature of the  
electric erosion of metals by pulse currents. Dokl. AN BSSR 5  
no. 5:208-211 My '61. (MIRA 14:5)

1. Fiziko-tekhnicheskiy institut AN BSSR, Kafedra eksperimental'noy  
fiziki Belorusskogo gosudarstvennogo universiteta imeni V.I. Lenina.  
(Metal cutting, Electric)

45264

Z/037/62/000/005-6/010/049

E073/E139

26-2011

AUTHORS: Nekrashevich, I.G., and Bakuto, I.A.

TITLE: Erosion of metals by a pulsed discharge in gases at atmospheric pressure

PERIODICAL: Československý časopis pro fysiku, no.5-6, 1962, 497-502

TEXT: Electric erosion occurs in all types of discharges between metallic electrodes regardless of whether the dielectric between the electrodes is a vacuum, gas, liquid or solid. Erosion occurs also if the electrodes are in direct contact. In all cases there is a marked contraction of the current lines at the spot where the current passes through the electrode surface, which leads to an increase in resistance at the contact area. Although electric erosion of metals is generally considered to be thermal, in some cases there may be other causes: mechanical, thermo-mechanical and electromechanical. Under certain conditions it is possible to observe separation of metal particles as a direct result of the electric field forces. Numerous experiments by various authors have proved that the erosion process is discrete.

Card 1/ 3

Erosion of metals by a pulsed ...

Z/037/62/000/005-6/010/049  
E073/E139

The theory of the process must therefore be based on this fact. In 1955 the authors supplemented the theory of the thermal nature of electric erosion with the concept that this erosion was discrete and caused by the migrations of zones with high current densities in the discharge area at the electrode surface. It was assumed that at any instant the current did not flow through the entire surface of the electrode that was in contact with the discharge plasma but only through a small high-conductivity puncture in this surface, which migrates along the electrode surface during the discharge. The current density through such a puncture was found to be at least  $10^6$  to  $10^7$  A/cm<sup>2</sup>, and the size of a puncture does not exceed  $10^{-5}$  to  $10^{-7}$  cm<sup>2</sup>. As a result of over-heating, there is a micro-explosion of a small volume of metal, accompanied by the formation of a conducting contact at another part of the surface. This process is continuously repeated and thus the erosion trace is the result of migration of the conducting metal contact with the discharge channel. If elementary erosion processes are sufficiently rapid, the thermal processes can be expressed separately for each elementary act of erosion by the

Card 2/3

Erosion of metals by a pulsed ...

Z/037/62/000/005-6/010/049  
E073/E139

following simplified equation:

$$\frac{\partial T}{\partial t} = \eta \frac{e}{c_0} (1 + \alpha T) j^2$$

This equation fits the experimental facts over a wide range of conditions. In order to show which of the available theories should be applied to given experimental conditions, it is necessary to investigate in detail the physical processes occurring directly at the point of contact between the metal and the plasma.

ASSOCIATION: Fysikálně technický ústav AVBSSR, Katedra experimentální fyziky Beloruské státní university V.I. Lenina, Minsk  
(Physicotechnical Institute AS BSSR, Department of Experimental Physics of the Belorussian State University imeni V.I. Lenin, Minsk)

Card 3/3

Z/037/62/000/005-6/022/049  
E140/E562

24780

AUTHORS: Nekrashevich, Ye. G. and Bakuto, Ye. A.

TITLE: On the electric breakdown of dielectrics

PERIODICAL: Československý časopis pro fysiku, no. 5-6, 1962,  
583-589

TEXT: Electric breakdown in an arbitrary dielectric is discussed from the energy point of view. The author starts from the general Fourier equation in which, in addition to the term characterizing the action of the spatial thermal source, he introduces another term, characterizing the creation of particles of the material, which have a certain critical energy value. An analysis of the equation and its integration for two limiting cases lead to results which characterize the electric breakdown of dielectrics. A puncture criterion is derived. The most general dependence of the puncture strength on the state and on the physical properties of the dielectric is determined. The general method used for analysing puncture effects can be successfully applied also to other analogous processes such as the plastic creep of solids etc.

Card 1/2

24.7800

S/196/62/000/014/016/046  
E194/E155

AUTHORS: Nekrashevich, I.G., and Bakuto, I.A.

TITLE: On the electrical breakdown of dielectrics

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika,  
no.14, 1962, 5, abstract 14 B 24. (Dokl. AN BSSR,  
v.6, no.1, 1962, 26-30)

TEXT: The effect of electrical breakdown of any dielectric is described on the basis of a general energy relationship which allows for the energy expended in forming a new phase. Positive and negative charge-carriers released by ionisation play the part of new phases. With this method it is possible to exclude from consideration the concrete mechanism of micro-effects that occur during breakdown. The breakdown conditions that are obtained coincide in form with the Townsend conditions but are of a more general nature. The breakdown strength of a dielectric increases as it passes from the gaseous to the liquid and solid phases. For various solid dielectrics the breakdown strength is the greater, the higher the specific heats of melting and of

Card 1/2

*Phys.-Tech. Inst. AS BSSR.  
Belorussian State U.*



On the electrical breakdown of ...

S/196/62/000/014/016/046  
E194/E155

vaporisation and the higher the melting and boiling points of the dielectric.

3 references.

ASSOCIATION: Fiziko-tekhnich. in-t AN BSSR;  
(Physicotechnical Institute, AS BSSR).  
Belorusskiy gos. un-t im. V.I. Lenina  
(Byelorussian State University imeni V.I. Lenin)

[Abstractor's note: Complete translation.]

Card 2/2

24.2120

S/250/62/006/005/005/007  
1004/1204

**AUTHORS:** Nekrahevich, I. G. and Bakuto, I. A.

**TITLE:** Efficiency of electric spark machining as a function of pulse repetition rate and the average current value

**PERIODICAL:** Akademiya nauk Belaruskay SSR. Doklady, v. 6, no. 5, 1962, 308-310

**TEXT:** The purpose of the work was to investigate the above dependence because of it's theoretical and practical importance. The formula derived theoretically

$$M = \frac{v_0}{s_0} A I_{av}^2 \frac{1}{\tau f}$$

(A—constant dependent upon the electrode material,  $v_0$ ,  $s_0$  average value of the volume and area of the elementary erosion trace) gives the efficiency of the spark machining apparatus. The validity of the formula was proven experimentally, but an accurate theory of the process should take into account also the mechanism of disposal of erosion products from the interelectrode space.

**ASSOCIATION:** Fiziko-tehnicheskii institut AN BSSR (Physico-Technical Institute AS BSSR)

**SUBMITTED:** February 17, 1961

Card 1/1

3/250/62/006/010/004/006  
A062/A101

AUTHORS: Nekrashevich, I. G., Bakuto, I. A.

TITLE: On the possibility of applying a common method for describing the phenomena of an electric break-down and of a plastic deformation of a solid

PERIODICAL: Akademiya nauk BSSR. Doklady. v. 6, no. 10, 1962, 638 - 641

TEXT: To calculate plastic deformations of a solid, the authors propose to use the same general formula they had used previously (article in DAN BSSR, 6, no. 1, 1962) for calculating an electric break-down through a dielectric, because there is an evident analogy between the two kinds of phenomena. The general formula leads to a system of equations which fully describes the considered phenomenon and gives the relation between the applied force ( $f$ ) and the value ( $u$ ) of the flow of the substance that participates in the stream of the plastic deformation. The solution of the system in its general aspect presents considerable difficulties. The discussion is therefore limited to a general analysis and a complete solution is given only for a particular case.

Card 1/2

On the possibility of...

S/250/62/006/010/004/006  
A062/A101

ASSOCIATION: Fiziko-tekhnicheskiy institut AN BSSR (Physico-technical Institute,  
Academy of Sciences, Byelorussian SSR)

PRESENTED: by A. N. Sevchenko, Academician AS BSSR

SUBMITTED: March 20, 1962

Card 2/2

37272

S/057/62/032/005/020/022  
B104/B102

24.7500

AUTHORS: Nekrashevich, I. G., and Bakuto, I. A.

TITLE: The dependence of electroerosion on the length of the discharge tract in instruments with RC circuit

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 5, 1962, 641 - 643

TEXT: With the help of the "migration theory" of electrical erosion (I. G. Nekrashevich, I. A. Bakuto, IFZh, 2, no. 8, 1959) an expression is derived for the mass  $m$  knocked out from the metal in one discharge of the capacitor

in RC circuit:  $m = (V_0 A / S_0^2) \int_0^{\tau} i^2 dt$ . From the equations describing the

capacitor discharge the number of discharges per second is obtained in the usual manner. The mass knocked out per second is then:

$M = m\nu = \frac{V_0 A}{S_0^2} \int_0^{\tau} i^2 dt / RC \ln(U_0 / (U_0 - U_1))$ . This yields after a short calculation

the final formula:  $M = QI^2 / \ln(1_0 / (1_0 - 1))$ , where  $Q = Dk_1^2 k_2^2$ ,  $D = V_0 A / S_0^2 RC$ ,  $V_0$   
Card 1/2

The dependence of electroerosion...

S/057/62/032/005/020/022

B104/B102

and  $S_0$  are volume and surface of the erosion cavity,  $A$  is a constant of the electrode material,  $k_1$  and  $k_2$  are constants,  $l_0$  is the breakdown distance for the potential  $U_0$ . The formula gives a good description of the experimental experimental results. There are 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN BSSR (Physicotechnical Institute AS BSSR); Kafedra eksperimental'noy fiziki Belorusskogo gos. universiteta im. V. I. Lenina, Minsk (Department of Experimental Physics of the Belorussian State University imeni V. I. Lenin, Minsk) 4

SUBMITTED: February 6, 1961, (initially)  
April 26, 1961 (after revision)

Card 2/2

BAKUTO, I.A.

Electronic breakdown of dielectrics. Dokl. AN BSSR 7 no:12:811-813 D '63. (MIRA 17:8)

1. Fiziko-tehnicheskij institut AN BSSR. Predstavleno akademikom AN BSSR A.N. Sevchenko.

NEKRASHEVICH, I.G.; BAKUTO, I.A.

Plastic flow of solids. Dokl. AN BSSR 8 no. 1:26-28 Ja '64.  
(MIRA 17:5)

1. Fiziko-tekhnicheskii institut AN BSSR. Predstavleno akademikom  
AN BSSR V.P.Severdenko.



PAKUTO, I.A.; NEKRASHOVICH, I.G.

Effect of additional energy on the plastic flow of a solid.

Vestnik AN BSSR. Ser. fiz.-tekh. nauk. no.4:132-135 '64.

(MIRA 18:3)

BAKUTO, I.A. [Bakuta, I.A.]

Effect of nonelectric energy on the breakdown of dielectrics.

Vestsi AN BSSR, Ser.fiz.-mat.nav. no.1:132-134 '65.

(MIRA 19:1)

MELEASHVICH, I.G. [Mokranovich, I.M.]; EALUTO, I.A. [Eakuta, I.A.]

Ionization of a gas by electrons. Vestnik AN BSSR. Ser.fiz.-mat.  
nav. no.2:115-118 '65. (MIRA 19:1)

L 3112-00 ENT(m)/ETC(f)/EAC(m)/EWA(d)/T/EWP(t) DS/JD  
ACC NE AP0000634 SOURCE CODE: UR/0407/65/000/001/0016/0019

AUTHOR: Nekrashevich, I. G. (Minsk); Bakuto, I. A. (Minsk)

ORG: none

TITLE: Effect of the initial discharge position upon bimetallic-electrode erosion

SOURCE: Elektronnaya obrabotka materialov, no. 1, 1965, 16-19

TOPIC TAGS: electric discharge, bimetal, electrode, erosion, tin, bismuth, lead, kerosene

ABSTRACT: The results of an experimental study of electric erosion of bimetal electrodes immersed in commercial kerosene are reported. Tin, bismuth, and lead were used in various combinations for bimetal electrodes; the Bi or Fe cathode was cone-shaped with a 38° angle. The cathode-cone point could be moved over the ground end surface of the bimetal anode. Unipolar square 900-amp 200-v pulses were used. Experimental curves show the effect of the cathode-point anode-interface distance upon the (weighed) amount of erosion for Fe and Bi cathodes and Sn-Bi and Pb-Bi anodes, respectively. Formulas based on a "partial migration theory" are derived. Orig. art. has: 3 figures and 11 formulas.

SUB CODE: 09,11,13/ SUBM DATE: none / ORIG REF: 002

Card 1/1

ACC NR: AP6026318

(A,N)

SOURCE CODE: UR/0407/65/000/003/0024/0026

AUTHOR: Nekrashovich, I. G. (Minsk); Bakuto, I. A. (Minsk)

ORG: none

TITLE: Investigation of electro-erosion phenomena on the surface of a two-layer electrode

SOURCE: Elektronnaya obrabotka materialov, no. 3, 1966, 24-26

TOPIC TAGS: erosion, electric erosion, spark erosion, metal plating

ABSTRACT: These experiments were conducted: Small copper plates 0.02, 0.17, 0.5, and 1-mm thick were (rosin) soldered with a layer of tin, thus forming bimetal plates. The polished copper surface constituted one electrode; an 8-mm diameter cone-shaped-end Armco-iron rod served as the other electrode. A square 900-amp, 240- $\mu$  sec, 200-v impulses were passed between the electrodes immersed in commercial kerosine. Thus, first copper and then tin was subjected to erosion. It was found that the erosion of both electrodes decreased as the copper thickness increased (curves shown). The results are qualitatively explained by the migration theory of electro-erosion. Orig. art. has: 2 figures and 4 formulas.

SUB CODE: 13, 09 / SUBM DATE: none / ORIG REF: 003

Card 1/1

NOVOGORODSKAYA, T.I.; GAL'PERINA, R.Ye.; BAKYCHAROV, Ya.P.

Late results of resuscitation following clinical death. Vest.khir.  
84 no.1:118-120 Ja '60. (MIRA 13:10)  
(RESUSCITATION)

BAKYCHAROV, Ya.P.

Complications and mortality in patients with trochanteric fractures of the hip. Khirurgiia 39 no.5:25-29 My '63.  
(MIRA 17:1)

1. Iz travmatologicheskogo otdeleniya (sav. - prof. A.V. Kaplan) Tsentral'nogo instituta travmatologii i ortopedii (dir. - prof. M.V. Volkov) Ministerstva zdravookhraneniya SSSR.

BAKYCHAROV, Ya.P.

Two-flange nail with a strap for the cervicodiaphysial  
fixation of trochanteric hip fractures. Ort. travm. i protez.  
23 no.10:59-61 O '62. (MIRA 17:10)

1. Iz TSentral'nogo instituta travmatologii i ortopedii (dir.-  
doktor med. nauk M.V. Volkov). Adres avtora: Moskova, G-21,  
Teplyy pereulok, d.16, TSentral'nyy institut travmatologii i  
ortopedii).



BRAYNE, G. A. (Grad stud)

Dissertation: "Operational Conditions of a Power System Under Overloading." Cand  
Tech Sci, Moscow Order of Lenin Power Engineering Institute imeni V. I. Molotov,  
22 Jun 54. (Vechernyaya Moskva, Moscow, 11 Jun 54)

SC: SCM: 318, 23 Dec 1954

BAKYRDZHAYEV, NIK, KHR.

Bulgaria/Chemical Technology - Chemical Products and Their Application. Fermentation Industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63587

Author: Bakyrzhayev, Nik, Khr.

Institution: None

Title: Technology of Red Wine of Gymza Variety

Original  
Periodical: K'm tekhnologiyata na g'mzovite cherveni vina. Lozarstvo i vinarstvo, 1954, 3, No 4, 239-242; Bulgarian

Abstract: Description of the technology of the making of red wine from Gymza grapes, which is the most widespread variety in Bulgaria, by means of fermentation in crushed form. The necessity of a correct sulfitization is emphasized.

Card 1/1

BULGARIA/Optics - Photography.

K

Abs Jour : Ref Zhur Fizika, No 4, 1960, 10121

Author : Malinovskiy, I., Bakurdzhiev, Iv., Kandilarov, P.

Inst : -

Title : New Method of Obtaining Silver Halogenides with a Low Fog Level

Orig Pub : Dokl. Bulg. AN, 1959, 12, No 2, 125-128

Abstract : Methods have been developed for obtaining pure AgHal, in which the possibility of adsorption on the AgHal of foreign ions (particularly  $\text{SiO}_2$  in the contact between moist AgHal with glass) have been reduced to a minimum, so as to prevent spontaneous reduction of the AgHal and formation of a considerable fog in the subsequently prepared crystals of AgHal for model experiments on the mechanism of the photographic process. To prepare AgCl, use is made of chloridation of  $\text{AgNO}_3$ , whereas AgBr is prepared by bromination of Ag. In the production of AgCl, several grains

Card 1/3

- 174 -

BULGARIA/Optics - Photography

K

Abs Jour : Ref Zhur Fizika, No 4, 1960, 10121

of quite pure AgCl are placed in a test tube with a drawn capillary end and transferred to an oven, where it is molten, placed in a stream of dry chlorine, the HCl is removed, and the test tube is then gradually filled with dry pure AgNO<sub>3</sub>, which goes into AgCl in the stream of chlorine. A series of such drawn test tubes are then mounted in the oven, one under the other, and the resultant molten AgCl is gradually filtered from the upper test tubes into the lower one in an ascending stream of Cl. To prepare AgBr, elementary silver, separated electrolytically from a solution of AgNO<sub>3</sub> and dried, is placed in a test tube with drawn capillary, transferred to the oven, and treated with bromine by evaporating liquid bromine. Then, as in the production of the AgCl, a series of drawn test tubes is mounted one on top of the other and the molten AgBr is subjected during the instant of its production to repeated filtration in a

Card 2/3

BULGARIA/Optics - Photography.

K

Abs Jour : Ref Zhur Fizika, No 4, 1960, 10121

bromine atmosphere. -- A.L. Kartuzhanskiy

Card 3/3

- 175 -

BLIZNAKOV, G.; POLIKAROVA, R.; BAKYRDZHIYEV, I.

Adsorption of ammonia on methoxylated silica gel surfaces.  
Dokl. AN SSSR 153 no.5:1097-1100 D '63. (MIRA 17:1)

1. Institut obshchey i neorganicheskoy khimii Bolgarskoy  
Akademii nauk, Sofiya, Bolgariya.

BAKYRDZHIYEV, I. [Bakurdzhiev, I.]; MEKHANDZHIYEV, D. [Mekhandzhiev, D.]

Adsorption properties of thermal dehydrated samples of powdered silica gel. Doklady BAN 17 no.8:741-744 '64.

1. Predstavleno akad. R. Kuishevym.

BLIZNAKOV, G.; MEKHANDZHIYEV, D. [Mekhandzhiev, D.]; BAKYRDZHIYEV, I.  
[Bakurdzhiev, I.]

Adsorption properties of methoxylated surfaces of powdered  
silica gel. Doklady BAN 17 no.8:745-748 '64.

1. Predstavleno akad. R.Kaishavym.



BLIZNAKOV, G.; BAKYRDZHIYEV, I. [Bakurdzhiev, I.]; OSMEEVA, O.

Interaction of surface hydroxyl groups of aluminum oxide.  
Doklady BAN 17 no.12:1103-1106 '64.

1. Institute of General and Inorganic Chemistry of the Bulgarian Academy of Sciences, Sofia. Submitted July 25, 1964.

12118 / 15.12.1956, Nikola Khr.

Bulgaria/Chemical Technology - Chemical Products and Their Application. Fermentation Industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63580

Author: Bakirdzhiyev, Nikola Khr.

Institution: None

Title: Turbidity and Clarification of Wine

Original

Periodical: Razm"tvane i izbistryane na vinata. Lozarstvo i vinarstvo, 1955, 4, No 3, 189-192; Bulgarian

Abstract: Considered are different instances of turbidity formation in wine, means of preventing turbidity and measures for turbidity control.

Card 1/1

BAKYRDEHIYEV, E. nauchnyy sotrudnik (Bolgarskaya Narodnaya Respublika)

Apparatus for determining the biological activity of tissue preparations. Veterinariia 41 no.5:111-112 My '64.

(MIRA 18:3)

LONGAUER, J.; BAKYTA, A.

Hemangiectasis atrophicans - variation of the Klippel-Trenaunay syndrome. Cesk.derm. 98 no.6:388-390 D '63.

1. Dermato-venerologicke oddelenie OUNZ v.Prievizsi, veduci MUDr. J. Longauer.

\*

LONGAUER, J.; BAKYTA, A.

Drug exanthem after antiepileptics. Cesk. dermat. 29 no.3:211-214.  
My'64.

1. Dermato-venerologicke oddelenie OUNZ v Prievidzi; veduci  
MUDr. J.Longauer.

*BAKZEREV, N.*

USSR/Cultivated Plants - Medicinal, Essential Oils. Poisonous

M-10

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1800

Author : N. Bakzerev

Inst : Not Given

Title : Application of Shower Irrigation on the Opium Poppy

Orig Pub : S.kh. Kirgizii, 1956, No 9, 35-39

Abstract : A study of the effect of pre-plowing irrigation on the opium yield has been conducted in 1945, 1947 and 1951 on the Przheval'skiy testing station and in the kolkhozes of the Przheval'skiy rayon. Under dry spring conditions, the autumn shower irrigation considerably increases the crop of raw opium. The author recommends the application of the above mentioned irrigation in those zones, where the raising of opium poppies is connected with irrigation.

Card : 1/1

KOLESNIK, A.A., prof.; GRYUNER, V.S., prof.; BAKZEVICH, D.D., dots.; ZABOLOTSKIY, M.S., dots.; OGNEVA, O.K., dots.; SMIRNOVA, N.A., dots.; SMOL'SKIY, N.T., kand. tekhn. nauk, prepod.; AYRIYEVA, N.S., red.

[Study of food products] *Tovarovedeniye prodovol'stvennykh tovarov*. [By] A.A.Kolesnik i dr. Moskve, Ekonomika, 1965. 607 p. (MIRA 18:7)

1. Moskovskiy institut narodnogo khozyaystva im. G.V. Plekhanova (for all except Ayriyeva).

BAL, ANTONI.

ZAPOBIEGANIE KWASNIENIU MLEKA. (Wyd. 1.)

Warszawa, Poland. Wydawn. Przemysłu Lekkiego i Spożywczego, 1954. 54 p.

Monthly List of East European Accessions (EEAI) LC. Vol. 8, No. 8, Aug. 1959

Uncl.



BAL, Franciszek

Who makes it difficult, city planning for geodesy or  
geodesy for city planning? Przegl geod 35 no.1:37-38  
Ja '63.

BAL, Franciszek

History of a certain concept. Przegl geod 35 no.2:102  
F '63.

BAL, Franciszek

Results of the contest for voivodeship and city surveying enterprises  
of communal management. Przegl geod 36 no.6:241 Je '64.

BAL, Lasku (Klush, Ruzyniya)

Development of nomography in Rumania. Nom. sbor. no.2:6-11 '64.  
(MIRA 18:3)

BAL. L.

Some equations represented by nomograms with oriented  
transparency. Bul stiint polit Gluj no.5:27-37 '62.

BAL, L.

Nomographic representation of some systems of equations.  
Bul stiint polit Cluj no.7:17-23 '64.

BAL, Lasou

Properties of certain special surfaces  $h(z) = f(x) + g(y)$ . Studii  
cerc mat Cluj 9 no.1/4:39-44 '58. (REAI 10:5)

1. Catedra de geometrie, Universitatea "V.Babes" - Cluj; Comitetul de  
redactie, Studii si cercetari de matematica (Academia R.P.R., Filiala  
Cluj, Institutul de calcul).

(Nomography (Mathematics)) (Surfaces) (Topology)

BAL, Marian, mgr inż.; SKORUPA, Andrzej, mgr inż.

Ultrasonic defectoscopy of fillet welds in steel structures  
of metallurgic installations. Przegl spaw 16 no. 1: 17-20  
Ja '64.

1. Akademia Gorniczo-Hutnicza, Krakow.



SZUBA, Jerzy; BAL, Stanislaw; SWIERCZEK, Roman

Experimental determination of the initial and end points  
of evaporation of multi component mixtures in the state of  
equilibrium. Koks 8 no.3:79-83 My-Je'63.

1. Katedra Chemicznej Technologii Węgla, Politechnika, Gli-  
wice.

SZUDA, Jerzy; BAL, Stanisław, SWIERCZEK, Roman

Experiment in determining the vapor pressure of typical fractions of high-temperature tar on the basis of a nomogram. Koks 8 no.6:212-219 D '63.

1. Katedra Chemicznej Technologii Węgla, Politechnika Śląska, Gliwice.

BELYAKOV, F.Ye.; BABIN, B.N.; BAL', Y.; BOROVKOV, P.N.; VOYEVODIN, I.N.;  
 GUREVICH, G.M.; GORBUNOVA, P.I.; KONNOV, A.S.; KALANTAROVA, M.V.;  
 KASHIRSKIY, A.Ya.; KAZANCHYEV, Ye.N.; LEKSUTKIN, A.F.; LETI-  
 CHEVSKIY, M.A.; LOPATIN, S.Z.; MIRSKIY, V.N.; PODSEVALOV, V.N.;  
 SUBBOTINA, V.P.; TANASIYCHUK, N.P.; FEDOTOV, S.D.; FISENKO, K.N.;  
 KL'KIND, I.G.; BOVIN, S.S.; VASIL'YEV, L.T.; DRINKOV, V.D.; DALE-  
 CHIN, N.I.; DADAGOV, I.A.; YERMOSHINA, V.I.; ZHUKOV, I.V.; ZIMIN,  
 D.A.; IVANNIKOV, A.Ya.; KOVALEV, M.K.; LUGAKOVSKIY, N.L.; MALEVSKIY,  
 A.F.; SEREZHNIKOV, V.K.; SEMIGLASOV, M.D.; SOKOLOV, A.V.; STEPANOV,  
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 CHIKINDAS, G.S.; SHCHERBUKHINA, S.N.; DYNKIN, G.Z.; LYSOV, V.S.;  
 OSHEROVICH, A.N.; ROKITSINSKIY, E.V.; BRASLAVSKIY, M.S.; RUDENKO,  
 I.A.; ZHUKOBORSKIY, M.S.; ZHDANOV, I.Ye.; SUSLIN, V.A.; BRUS, A.Ye.;  
 VOLYNSKIY, S.A.; KLYUYEV, V.A.; ISTRATOV, A.G.; TIKHOMIROV, I.F.;  
 BUTYRIN, Ya.N.; VOLYNSKIY, S.A.; MINYEV, M.P.; MAL'TSEV, V.I.;  
 VIDETSKIY, A.P., kand.tekhn.nauk, glavnyy red.; DEMIDOV, A.N., red.;  
 KRAVETS, A.L., red.; KLIMOVA, Z.I., tekhn.red.

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25913

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BAL', V. M.  
25912

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|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| Country     | : USSR                                                                                                                                                                                                                                                                                                                                          | M |
| Category    | CULTIVATED PLANTS. FRUITS. Berries.                                                                                                                                                                                                                                                                                                             |   |
| Abs. Jour.  | REFZHUR-BICL., 21, 1958, NO-96138                                                                                                                                                                                                                                                                                                               |   |
| Author      | : Solov'yev, V.P.; Nukarova, A.T.                                                                                                                                                                                                                                                                                                               |   |
| Institution | : Tadzhik Sci. Res. Inst. of Horticulture, Viticul-*                                                                                                                                                                                                                                                                                            |   |
| Title       | : Shoot and Root Growth Dynamics in the Almond<br>Growing under Irrigational Conditions in the<br>Glasar Valley                                                                                                                                                                                                                                 |   |
| Orig. Pub.  | : Byul. nauchno-tekhn. inform. Tadzh. n.-i. in-t sadovod-<br>stva, vinogradarstva i subtrop. kul'tur, 1957,<br>vyp. 1, 54-57                                                                                                                                                                                                                    |   |
| Abstract    | : Observations made on the almond varieties Miflet<br>(early flowering), Kuraki-Aloshi (mid-season<br>flowering) and Langvadoo (late flowering) have<br>demonstrated that the most active root and shoot<br>growth occurred during the early spring period.<br>Root and almond root growth was observed from the<br>end of October to February. |   |
|             | * ture and Subtropical Cultures                                                                                                                                                                                                                                                                                                                 |   |
| Card:       | 1/1                                                                                                                                                                                                                                                                                                                                             |   |



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1. Astrakhanskiy tekhnicheskoy institut rybnoy promyshlennosti i khozaystva, kafedra tekhnologii rybnykh produktov.

BAL', V. V.

"Salt Brines for Herrings, Their Formation and Certain Properties."  
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imeni A. I. Mikoyan

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Kazansk. Trudov. Astrakhan. Tekhnol. Inst. Rybn. Prom. i  
Khoz. 1953, No. 2, 110-26. Referat Zhur. Khim. 1955,  
No. 4922. — The sp. gr. of pickle is higher than the sp. gr. of  
NaCl soln. of the same concn. This is occasioned by the  
presence in pickle of other substances. Thus, the detn. of  
the concn. of pickle from its sp. gr. is inapplicable. More  
reliably the concn. of a pickle soln. can be detd. from its  $n_D$ .  
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BALA, C: NEDELCU, V. .

D. Damsker's Actionari electrice (Electric Drives); a book review.

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ELECTROTEHNICA

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SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 12  
December 1956

BALA, C.

Premagnetizing windings used in electric generator for apparent correction of hysteresis cycle. In English, p. 249.

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Bala, C.

The negative sequence reactance of the triphasic synchronous generator.  
In English. p. 361.

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ENERGETICS. (Academia Republicii Populare Romine. Institutul de Energetica)  
Bucuresti, Rumania Vol. 2, no. 2, 1957

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Uncl.

RALA, C.

The resistance compensator; theoretical considerations and criteria for planning.

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1957

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BALA, C.

TECHNOLOGY

PERIODICAL: STUDII SI CERCETAR DE ENERGETICA. Vol. 8, no. 4, 1958

BALA, C. An automatic tension regulator of electro-magnetic type. p. 621

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BALA, C.

A synchronous machine excited from an alternating-voltage source in stationary operating conditions. p. 159.

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BALA, Constantin

Limits of the functioning of turboalternators in asynchronous conditions. Rev electrotechn energet 6 no.1:53-66 '61.

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BALA, C. V.

The iron losses in the solid rotor of the synchronous machines with round rotor in asynchronous operation. Rev elektrotehn energet 6 no.2:263-277 '61.

BALA, C. V.

Pendular impedance of a synchronous machine. Studii cerc energet 11  
no.3:567-579 '61.

APETREI, Constantin, ing., conf., candidat in stiinte tehnice;  
BALA, Constantin, ing., candidat in stiinte tehnice

Calculus and experimental determination of axial forces in  
power transformers. Electrotehnica 10 no.8:285-294 Ag '62.

1. Catedra de masini electrice de la Inst. Politehnic, Bucuresti  
(for Apetrei). 2. Sef de lucrari la Inst. Politehnic, Bucuresti  
(for Bala).

BALA, O., ing. (Bucuresti); BARGAUANU, M., ing. (Bucuresti)

A direct experimental method of determining the mechanical characteristics of electric motors. Electrotehnica 10 no.12: 437-440 D '62.

1. Sef de laborator la Institutul de energetica (for Bala).
2. Cercetator principal la Institutul de energetica (for Barga-  
anu).

BALA, C.V.

Reference systems used in the theory of three-phase electric systems. Rev electrotechn energet 8 no.1:57-66 '63.



BALA, C.V.; BIRGAUANU, M.E.; CRETU, D.V.

Study of some special operating systems of high-power synchronous  
motors. Rev electrotechn energet 8 no.1:77-97 '63.

BALA, C. V., candidat in stiinta tehnice (Bucuresti)

Dimensioning resonant filters for inductive and distorted power receivers. Electrotehnica 12 no.6:205-213 Je '64.

1. Head of the Laboratory of the Institute of Electric Power of the Rumanian Academy, and Lecturer at the Polytechnic Institute, Bucharest.

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| COUNTRY:   | : Rumania                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |
| CATEGORY   | :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |
| ABS. JOUR. | : RZKhim., No.22 1959 No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 79717 |
| AUTHOR     | : Bulmovici, D., Bala, E., and Totirescu, G.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |
| INST.      | : Not given                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |
| TITLE      | : Changes in the Bulk Density of Brown Coals as a Function of Moisture Content                                                                                                                                                                                                                                                                                                                                                                                                                       |       |
| ORIG. PUB. | : Studii si Cercetari Enorg, 8, No 2, 299-303 (1958)                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |
| ABSTRACT   | : The authors have investigated the correlation between the bulk density of ground coals and their moisture content as a contribution to the improvement of calculations related to the evaluation of the grindability characteristics, classification, pneumatic transport characteristics, and combustion characteristics of brown coals in fluidized beds. In their investigation the authors have used samples of a number of Rumanian coals, prepared by both increasing gradually the moisture |       |

CARD: 1/3

|            |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |
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| CONTRACT   | :   | INTEREST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |
| CATEGORY   | :   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |
| ARG. JOUR. | :   | RZKhim., No.22 1957, No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 79717 |
| AUTHOR     | :   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |
| INST.      | :   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |
| TITLE      | :   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |
| ORIG. PUB. | :   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |
| ABSTRACT   | :   | <p>content of the coals and by sampling the coals at different time intervals during the drying process. Analyses on the starting coal samples are given together with a formula for the determination of the bulk density and curves giving the dependence between the bulk density and the moisture content (MC) of the coals. An analysis of the latter curves shows that this dependence is linear, the slope of the curves being greater for moist coals than for dried coals. The authors also point to</p> |       |
| CARD#      | 2/3 | 226                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |

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| COUNTRY:   | : Rumania                                                                                                                                                                                                                         | H-22  |
| CATEGORY   | :                                                                                                                                                                                                                                 |       |
| ABS. JOUR. | : RZKhim., No.22 1959 No.                                                                                                                                                                                                         | 79717 |
| AUTHOR     | :                                                                                                                                                                                                                                 |       |
| INSE.      | :                                                                                                                                                                                                                                 |       |
| TITLE      | :                                                                                                                                                                                                                                 |       |
| ORIG. PUB. | :                                                                                                                                                                                                                                 |       |
| ABSTRACT   | the presence of hysteresis, with the result that<br>the bulk density of the coals recorded during the<br>drying process is lower than the bulk density ob-<br>tained during the gradual moistening of the coals.<br>N. Kirichenko |       |

CARD: 3/3

BALA, M., ing.; WEHRY, A., ing.

Contributions to the movement of water over spillways with practical profile. Hidrotehnica 8 no.3:111-113 Mr '63.

MOSZEW, J.; BALA, M.

Heterocyclic analogs of carcinogenic hydrocarbons; tetralyl derivative of benzo-diasanthracene. Bul chim PAN 12 no.6: 393-397 '64.

1. Department of Organic Chemistry of Jagiellonian University, Krakow. Submitted April 8, 1964.

BALA, M.; POPA, Gh.; DAVID, I.

Lines of influence for rigid arcs with moments of variable inertia  
radially loaded. Bal St si Tehn Tim 9 no.2:549-561 J1-D '64.



BALA, M.; POPA, Gh.; DAVID, I.

Contributions to computing rigid arcs with moments of variable  
inertia. Bul St si Tehn Tim 9 no.1:223-233 Ja-Je '64.

BALA, M.; POPA, Gh.; DAVID, I.; FARCAS, D.

Diagrams for dimensioning rigid arcs with moments of variable  
inertia for uniform loadings radially distributed. Bul St si  
Tehn Tim 9 no.1:235-244 Ja-Je '64.



~~BALA, S.~~

TECHNOLOGY

PERIODICAL: HUTNIK, Vol. 25, no. 10, Oct. 1958.

BALA, S.; Jonca, J.; Rabaiski, J. Measurement and analysis of the rolling process in a blooming mill with a diameter of 750 mm. p. 390.

Monthly List of East European Accessions (EEAI) LC Vol. 8, No. 4, April, 1959, Unclass.

BALA, Stanislaw, mgr ins.; JONCA, Joachim, mgr ins.

Analysis of the rolling process in the 750 mm duoblooming mill.  
Wiad hut 16 no.6:169-177 Je '60.

KLOCEK, Tadeusz, mgr inż.; BALA, Stanisław, mgr inż.; JUSZKIEWICZ, Zbigniew,  
mgr inż.; MALINOWSKI, Lucjan, mgr inż.; WYSIATYCKI, Kazimierz, mgr  
inż.

Measurements of the ship hull pressure on the bow cradle during  
launching. Bud. okretowe Warszawa 9 no.10:346-350 '64

1. Technical University, Gdansk.

BALA, Yu. M.

So-called agranulocytosis (aleukia) with myeloblastic reaction. Ter.  
arkh., Moskva 25 no.5:84-88 Sept-Oct 1953. (GML 25:5)

1. Candidate Medical Sciences. 2. Of the Department of Hospital  
Therapy (Head -- Prof. V. S. Nesterov), Voronezh Medical Institute.

944  
Clinical significance of vitamin B<sub>12</sub> in the blood of patients suffering from pernicious anemia and B<sub>12</sub> hypovitaminosis. M. J. Davis, M.D., Inst. V. A. Medical Center, Los Angeles, 28, No. 2, 7, 1959. A method was devised for the determination of vitamin B<sub>12</sub> I. One cc. of serum was mixed with 2 cc. of the ppt. filtered off, the filtrate added to 10 cc. and heated on a water bath for 40 min. while replacing the evaporated water. The final vol. was allowed to go to 2 cc. This was injected into a white rat weighing 150-200 g. whose reticulocytes were counted preceding the injection. On the 2nd, 4th and 6th days following the injection the reticulocytes were detd. in the tail vein blood. An increase of 8-12% was considered a doubtful test, over 30% a positive. An increase was due mainly to I, but the possibility of the influence of deoxyriboside, folic acid, and others must be considered. In order to clarify this point I was interested to determine if serum from patients suffering with pernicious anemia, but not having the characteristic hyperchromic red blood cells, but with a normal hemoglobin content, would give a positive reaction. In such cases the reaction was much weaker positive reaction than in the case of untreated serum. Thirty-five persons suffering from various diseases besides pernicious anemia had a positive reaction. In the case of 11 persons suffering from untreated pernicious anemia and 18 who were treated with I the former group had negative reaction, the second a positive reaction.  
A. S. Murkin



BALA, Yu.N., Doc Led Sci--(diss) "Anemia with vitamin B12 deficiency."  
Voronezh, 1958. 15 pp (Min of Health USSR. Voronezh State Med Inst),  
200 copies (II, 47-58, 135)

-63-

USSR/Human and Animal Physiology. Blood. Blood Diseases.

T-4

Abs Jour: Ref Zhur. Biol., No 12, 1958, 55504.

Author : Bala, Yu. M.

Inst :

Title : The Problem of Hemolysis in Pernicious Anemia.

Orig Pub: Probl. gematol. i porolivaniya krovi, 1957, 2, No 3, 11-13.

Abstract: Some patients suffering from pernicious anemia (PA) were examined. A state of relapse of the disease existed in 20 patients, and a state of remission in 18. In 16 of the patients of the first group, a 0.5 percent hemolysis (H) occurred on the average on the 16th day, and a 1 percent hemolysis on the 24th day, while in donors (control group), a 0.5 percent hemolysis occurred on the

Card : 1/4

USSR/Human and Animal Physiology. Blood. Blood Diseases.

T-4

Abstr Jour: Ref Zhur Biol., No 12, 1958, 55504.

28th day, and a 1 percent hemolysis on the 38th day. When the erythrocytes (E) of such patients were put into healthy plasma, they hemolyzed slower than the E of donors which have been put into the plasma of patients. The 0.5 percent hemolysis of the patients' E in the plasma of donors occurred on the 29th day, while the 1 percent hemolysis of such E occurred on the 35th day. The 0.5 percent E hemolysis of the donors' blood, which was performed in the plasma of patients sick with PA, occurred on the 20th day, while the 1 percent hemolysis occurred on the 28th day. When the blood was taken from patients sick with PA during the remission stage, the speed of hemolysis in the banked blood of such patients approached the speed in the

Card : 2/4

USSR/Human and Animal Physiology. Blood. Blood Diseases.

T-4

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55504.

banked blood of donors. Here, the 0.5 percent hemolysis occurred on the 21st day, and the 1 percent hemolysis on the 27th day. Also, the speed of hemolysis of the erythrocytes of donors in the plasma of patients was reduced, and corresponded to the hemolysis speed of patients' erythrocytes in the plasma of donors. Apparently, substances are present in the serum of patients which contribute to the accelerated decay of the erythrocytes. In order to solve the problem of determining the site of E decay in PA, the bilirubin content was examined in 8 patients with recurrent PA and in 2 with a beginning remission, by obtaining specimens of the peripheral blood and of the bone marrow. The bilirubin content in the sternal specimen was the same

Card : 3/4

BALA, Yu.M., prof.; LIFSHITS, V.M.

Clinical significance of trace elements in leukemia and anemia.  
Report No.1: Nickel, vanadium, manganese. Probl. gemat. i perel.  
krovi no.5:28-34 '65. (MIRA 18:10)

1. Kafedra fakul'tetskoy terapii (zav.- prof. Yu.M. Bala)  
Voronezhskogo meditsinskogo instituta.

BALA, Yu.M.; LIFSHITS, V.M.

Content of trace elements in the blood in leukemia and anemia.  
Report No.1: Molybdenum and chromium. Probl. gemat. i perel.  
krovi no.6:23-27 '65. (MIRA 18:11)

1. Kafedra fakul'tetskoy terapii (zav. - prof. Yu.M.Bala)  
Voronezhskogo meditsinskogo instituta.

P/053/62/000/006/007/009  
I010/I210

24.3600

AUTHORS: Bała, Wacław, Rapior, Andrzej

TITLE: Technology and properties of electroluminescent cells with a solid dielectric

PERIODICAL: Przegląd Elektroniki, no.6, 1962, 324-328

TEXT: Electroluminescent cells called KEL, where the luminophores were a suspension in solid dielectric material. The best results were obtained with epoxy-plaxi, but since it was difficult to obtain, Epidian 3, hardened with anhydride of phthalic acid was employed. The technology of the cells manufacture is described. A table gives technological and material details of 9 types of cells. The effect of aging has been investigated for frequencies from 50 - 5000 o/sec during 3 months for

Card 1/2

P/053/62/000/006/007/009  
I010/I210

Technology and properties...

KEL-1 through KEL-4. Also deterioration of the cells with time at 50c/sec. and 220V was examined during 50 hours. It was found that the cells working at 2 kc/sec. (KEL-8, KEL-9, KEL-6) deteriorate much faster than the ones working at 50 c/sec. (KEL-5, KEL-7). The solid cell KEL-8 is more stable than the oil cell KEL-6. The solid cell KEL-9 made of green phosphor deteriorated fastest of all investigated cells. Further investigations will be made. There are 5 figures, 1 table and 3 references (2 Western and 1 Russian).

ASSOCIATION: Przemyslowy Instytut Elektroniki (Industrial  
Institute of Electronics)

Card 2/2



BALA, Wacław; RAPIOR, Andrzej

The obtaining and the properties of electroluminophors. Przegl  
elektroniki 3 no.10:580-585 0 '62.

1. Przemyslowy Instytut Elektroniki, Warszawa.

BALA, Wladyslaw, mgr.ins.

Reinforced mole drainage with the use of polyvinyl film. (From experiences in the German Democratic Republic). Gosp wodna 22 no.6:285-288 Je '62.

~~BALA~~, Yu. M., prof.; KHRITININA, I. V.

Clinical significance of hemoglobin electrophoresis in some hematological diseases. Probl. gemat. i perel. krovi no.12:52-53  
'61. (MIRA 15:6)

1. Iz kafedry propedevtiki vnutrennikh bolezney (sav. - prof. Yu. M. Bala) Voroneshskogo meditsinskogo instituta.

(BLOOD—DISEASES) (HEMOGLOBIN) (ELECTROPHORESIS)

KASSIRSKIY, I.A., prof.; BALA, Yu.M., prof.

Report of the 9th European Hematological Congress, in Lisbon,  
August 26-31, 1963. Probl. genat. i perel. krovi 9 no.4:51  
Ap '64. (MIRA 17:11)

1. Deyatvitel'nyy chlen AMN SSSR (for Kassirskiy).